

**Notice of Allowability**

Application No.

10/698,669

Examiner

Binh V. Ho

Applicant(s)

SHEN ET AL.

Art Unit

2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/26/2007.
2. ☒ The allowed claim(s) is/are 1-5 and 16-19.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 07/11/2005
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
DON WONG  
SUPERVISORY PATENT EXAMINER

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## DETAILED ACTION

### Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and /or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.3.12. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. The following claim has been amended upon agreement by applicant during a telephone conversation with Mr. John P. Wagner on 05/31/2007.

Amendments to claims 1, 23, 36, 41, and 46:

Claim 1 (Currently Amended): A method of prioritizing content, said method comprising:

receiving at a proxy cache a request for a first content object;

searching an access log of said proxy cache for a portion of said first content object; finding at least one segment of said portion of said first content object on said proxy cache;

calculating a size of said portion of said first content object on said proxy cache;

deriving a normally utilized size of said first content object requested, wherein said normally utilized size is based on average of times said first content object was requested, the deriving the normally utilized size of said first content object requested comprises: utilizing said access log of said proxy cache to establish an average view length of said first content object;

comparing the size of said portion of said first content object on said proxy cache with the normally utilized size of said first content object requested, wherein said first content object is prioritized based on said comparison;

admitting the at least one segment of said first content object to said proxy cache if said normally utilized size is greater than the size of said portion of said first content object on said proxy cache;

denying the at least one segment of said first content object to said proxy cache if said normally utilized size is less than the size of said portion of said first content object on said proxy cache;

checking available cache space on said proxy cache for room to admit a further segment of said first content object;

making room on said proxy cache for said further segment of said first content object;

wherein said making room on said proxy cache comprises:

calculating a utility value for other content objects on said proxy cache;

prioritizing said other content objects based on said utility value;

selecting one of said other content objects with a smallest utility value;

removing a lowest priority portion of said other content object with the smallest utility value on said proxy cache;

admitting said further segment of said first content object to said proxy cache;

segmenting said one of said other content objects with the smallest utility value based on a previous duration of access to said one of said other content objects with

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the smallest utility value if said one other content object of said other content objects

with the smallest utility value is fully cached;

removing all segments of said one of said other content objects with the smallest utility

value if said one of said other content objects with the smallest utility value is not fully

cached.

2. (Original) The method of Claim 1 comprising:

receiving said request for said first content object from a client device.

3. (Original) The method of Claim 1 wherein the calculating the size of said portion of said first content object on said proxy cache comprises:

counting a total number of segments of said portion of said first content object cached on said proxy cache;

measuring a length of said total number of segments of said portion of said first content object;

and multiplying said total number of segments with said length of said segments of said first content object.

4. (Original) The method of Claim 1 wherein the deriving the normally utilized size of said first content object requested comprises:

utilizing said access log of said proxy cache to establish an average view length of said first content object.

5. (Original) The method of Claim 1 wherein said method comprises:

admitting no further portion of said first content object to said proxy cache if said normally utilized size is less than the size of said portion of said first content object on said proxy cache.

Claims 6-15 and 20-21 cancel

16. (Currently amended) A computer-readable storage medium having computer-readable program code embodied therein for causing a caching proxy to perform a method of prioritizing content, said method comprising:

receiving at a proxy cache a request for a first content object;  
searching an access log of said proxy cache for said first content object;  
finding at least one segment of said first content object on said proxy cache;  
calculating a size of said first content object on said proxy cache;  
utilizing said access log of said proxy cache to establish an average view length of said first content object;  
calculating the average view length of the segment of said first content object requested;  
comparing the size of said first content object on said proxy cache and the average view length of said first content object requested;

denying the at least one segment of said first content object to said proxy cache if said average view length is less than the size of said first content object on said proxy cache;

admitting the at least one segment of said first content object to said proxy cache if said average view length is greater than the size of said first content object on said proxy cache;

checking available cache space on said proxy cache for room to admit said further segment of said first content object;

calculating a utility value for other content objects on said proxy cache;

prioritizing said other content objects based on said utility value;

selecting one of said other content objects with a smallest utility value;

removing portions of lowest priority of said other content objects with the smallest utility value on said proxy cache;

admitting said further segment of said first content object to said proxy cache;

segmenting said one of said other content objects with the smallest utility value based on a previous duration of access to said one of said other content objects with the smallest utility value if said one of said other content objects with the smallest utility value is fully cached;

removing all segments of said one of said other content objects with the smallest utility value if said one of said other content objects with the smallest utility value is not fully cached.

17. (Original) The computer-readable storage medium of Claim 16 wherein said

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computer-readable program code embodied therein causes a caching proxy to perform a method of prioritizing content, said method comprising:

receiving said request for said first content object from an end user.

18. (Original) The computer- readable storage medium of Claim 16 wherein said computer-readable program code embodied therein causes a caching proxy to perform a method of prioritizing content, said method comprising:

finding a total number of said at least one segment of said first content object cached on said proxy cache;

measuring a length of said at least one segment of said first content object;

and multiplying said total number of cached segments with said length of said at least one segment of said first content object.

19. (Original) The computer- readable storage medium of Claim 16 wherein said computer-readable program code embodied therein causes a caching proxy to perform a method of prioritizing content, said method comprising:

utilizing said access log of said proxy cache to establish an average view length of said first content object.

3. The Examiner's amendment has been made in order to place the application in a condition for allowance.

### **Reasons for Allowance**

4. The following is an examiner's statement of reason for allowance:

Claims 1, and 16 are considered allowable since the prior made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. Krissell (U.S. 2005/0060493) or Dixit (U.S. 7,051,161) or Wolf (U.S. 6,463,508), or Grampper (U.S. 6,502,106) taken individually or in combination, do not teach the claimed invention having a method of prioritizing content, said method comprising the deriving the normally utilized size of said first content object requested comprises: utilizing said access log of said proxy cache to establish an average view length of said first content object; denying the at least one segment of said first content object to said proxy cache if said normally utilized size is less than the size of said portion of said first content object on said proxy cache; removing a lowest priority portion of said other content object with the smallest utility value on said proxy cache;

admitting said further segment of said first content object to said proxy cache; segmenting said one of said other content objects with the smallest utility value based on a previous duration of access to said one of said other content objects with the smallest utility value if said one other content object of said other content objects with the smallest utility value is fully cached; removing all segments of said one of said other content objects with the smallest utility value if said one of said other content objects with the smallest utility value is not fully cached with a combination of all recitations as defined in claims 1 and 16.

Therefore, claims 1-5 and 16-19 are presently allowed.



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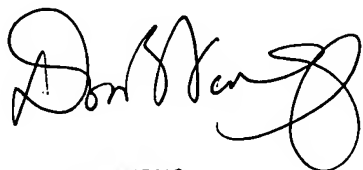
5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Inquiry**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh V. Ho whose telephone number is 571 272 8583. The examiner can normally be reached on M-F from 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don K. Wong can be reached on 571 272 1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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